

but was not stated to be oviparous. The recent discovery of four gravid females in the collections of the Queensland Museum (QM J34827-29, 34866) provides additional information on reproduction, and reinforces the original inferences as to the seasonality and mode of reproduction in the species.

The four females each carried three shelled oviducal eggs (two in the right oviduct and one in the left), and were collected on 27 and 30 December 1978 at Beatrice Hill, NT. The summary statistics for these four females plus the one previously reported are: SVL 42-52 mm (*mean* = 46, *sd* = 4.7) and clutch size 3-5 (*mean* = 3.4, *sd* = 0.9).

These observations taken in conjunction with the earlier one suggests that female *S. darwiniensis* are sexually mature at a SVL of at least 42 mm, are oviparous with a variable clutch size of at least 3-5, and are reproductively active with oviducal eggs during the early to mid Wet Season (Dec - Jan).

## References

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## A Note on Diving Behaviour in the Northern Sand Goanna *Varanus panoptes*

The Northern Sand Goanna *Varanus panoptes* is a large species which is common in a variety of woodland and grassland habitats across northern Australia (Wilson & Knowles 1988). Little information has been published on the habitat requirements of this species, but it is frequently encountered along small watercourses in the Top End. The following observations were made on an individual of this species during the course of a fish population study at a small creek near Naborlek, in western Arnhem Land.

At approximately 2.00 pm on 9 May 1990, a small (0.5 m total length) *V. panoptes* appeared at the edge of the creek, about ten metres downstream of my position. As I was at that time sitting quietly by the bank in a grassy area, I was confident that the goanna was unaware of my presence. The creek was about seven metres wide and 0.6 m deep, and was exceptionally clear, with a sandy bottom. The goanna slid into the creek, swam to the bottom, then crawled upstream along the bottom for about ten metres, to a point opposite my location. There, it stopped, and remained motionless on the bottom. During this time, I noticed that the goanna's eyes were closed.

Exactly ten minutes after submerging, the goanna slowly crawled up the bank and surfaced. It was still apparently unaware of my presence. After a couple of

minutes on the surface, the goanna turned and submerged once again, this time crawling along the bottom of the creek in a more determined manner.

The goanna appeared to be searching for food on the bottom. It methodically worked its way along the undercut bank of the creek, poking its head into any holes encountered. During this activity the eyes remained closed, but the tongue was occasionally flicked. At one point, it encountered a large submerged log. It crawled under this log and remained out of sight for several minutes. It then continued its downstream journey, and re-surfaced some 20 m downstream of my location, once again exactly ten minutes after submerging. After the next dive it was not re-sighted.

*Varanus panoptes* is not generally considered to be a semi-aquatic species, and certainly has none of the adaptations present in the truly semi-aquatic monitors *V. mertensi* and *V. mitchelli*, such as the extreme lateral compression of the tail, and the high positioning of nostrils. Both of these semi-aquatic species are present in the same area where these observations were made, *V. mitchelli* being the more common of the two.

My interpretation of these observations is that the goanna was searching for food in the creek. Crustaceans such as the Freshwater Crab *Holthusiana transversa* and the Crayfish *Cherax quadricarinatus* occur in this creek (pers. obs.), as well as a number of fish species, and these may form part of the goanna's diet in this area. The fact that both observed dives were of the same duration suggests that this may be near the comfortable breath-holding limit for this species.

## References

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